City of Lake Jackson
2010 Drinking Water Quality Report

Our Drinking Water Meets or Exceeds All Federal (EPA) Drinking Water Requirements

This report is a summary of the quality of the water we provide our customers. The analysis was made by using the data from the most recent U.S. Environmental Protection Agency (EPA) required tests and is presented in the attached pages. We hope this information helps you become more knowledgeable about what's in your drinking water.

En Espanol
Este informe incluye informacion importante sobre el agua potable. Si tiene preguntas o comentarios sobre este informe en espanol, favor de llamar al tel. 979-415-2500 para hablar con una persona bilingue en espanol.

Water Sources
The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally-occurring minerals, and in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity. Contaminants that may be present in source water before treatment include:

- Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic system, agricultural livestock operations, and wildlife.
- Inorganic contaminants, such as salts and metals, which can be naturally-occurring or result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban storm water runoff, and residential uses.
- Organic chemical contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff, and septic systems.
- Radioactive contaminants, which can be naturally-occurring or be the result of oil and gas production and mining activities.

Where do we get our drinking water?
Our drinking water is obtained from surface and ground water sources. It comes from the following: the Gulf Coast Aquifer and the Brazos River. A Source Water Susceptibility Assessment for your drinking water sources(s) is currently being updated by the Texas Commission on Environmental Quality. The report will describe the susceptibility and types of constituents that may come into contact with your drinking water source based on human activities and natural conditions. The information contained in the assessment will allow us to focus our source water protection strategies. Some of this source water assessment information will be available later this year on Texas Drinking Water Watch at http://dww.tceq.state.tx.us/DWW/. For more information on source water assessments and protection efforts at our system, please contact us.

ALL drinking water may contain contaminants

When drinking water meets federal standards there may not be any health based benefits to purchasing bottled water or point of use devices. Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline (800-426-4791).

Secondary Constituents

Many constituents (such as calcium, sodium, or iron) which are often found in drinking water can cause taste, color, and odor problems. The taste and odor constituents are called secondary constituents and are regulated by the State of Texas, not the EPA. These constituents are not causes for health concern. Therefore, secondaries are not required to be reported in this document but they may greatly affect the appearance and taste of your water.

SPECIAL NOTICE

Required language for ALL community public water supplies:

You may be more vulnerable than the general population to certain microbial contaminants, such as Cryptosporidium, in drinking water. Infants, some elderly or immunocompromised persons such as those undergoing chemotherapy for cancer; those who have undergone organ transplants; those who are undergoing treatment with steroids: and people with HIV/AIDS or other immune system disorders can be particularly at risk from infections. You should seek advice about drinking water from your physician or health care provider. Additional guidelines or appropriate means to lessen the risk of infection by Cryptosporidium are available from the Safe Drinking Water Hotline at (800) 426-4791.

About the following pages

The pages that follow list all of the federally regulated or monitored constituents which have been found in your drinking water. U.S. EPA requires water systems to test up to 97 constituents.

DEFINITIONS:

Maximum Contaminant Level (MCL) - The highest permissible level of a contaminant in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

Maximum Contaminant Level Goal (MCLG) - The level of a contaminant in drinking water below which there is no known or expected health risk. MCLGs allow for a margin of safety.

Maximum Residual Disinfectant Level (MRDL)

The highest level of disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

Maximum Residual Disinfectant Level Goal (MRDLG)

The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contamination.

Treatment Technique (TT) - A required process intended to reduce the level of a contaminant in drinking water.

Action Level (AL) - The concentration of a contaminant, which, if exceeded, triggers treatment, or other requirements that a water system must follow.

ABBREVATIONS:

NTU - Nephelometric Turbidity Units
MFL - million fibers per liter (a measure of asbestos)
pCi/l - picocuries per liter (a measure of radioactivity)
ppm - parts per million, or milligrams per liter (mg/l)
ppb - parts per billion, or micrograms per liter (ug/1)
ppt - parts per trillion, or nanograms per liter
ppq – parts per quadrillion, or picograms per liter

Organic Contaminants

Disinfectants and Disinfection By-Products	Collection Date	Highest Single Sample	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Barium	1/7/2008	0.116	.116-.116	2	2	ppm	N	Discharge of drilling wastes; Discharge from metal refineries; erosion of natural deposits.
Arsenic*	2008-2005	1	0-2	0	10	ppb	N	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes.
Fluoride*	1/7/2008	0.66	.66-.66	4	4	ppm	N	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories.
Gross Beta Emitters	2009	5.4	5.4-5.4	0	50	pCi/L	N	Decay of natural and man-made deposits.
Gross Alpha	2009	2	2-2	0	15	pCi/L	N	Erosion of natural deposits.
Selenium	2008-2005	3.5	0-3.5	50	50	ppb	N	Discharge from petroleum and metal refiners; erosion of natural deposits; discharge from mines.
Nitrate (measured as Nitrogen)	2010	0.69	.29-.69	10	10	ppm	N	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.

*Arsenic - The arsenic value was effective January 23, 2006. In the event of a violation, you will be notified.
*Fluoride – May indicate a secondary constituent violation for fluoride.

Organic Contaminants

Synthetic organic contaminants including pesticides and herbicides	Collection Date	Highest Single Sample	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Simazine	2009	0.17	0 - .17	4	4	ppb	N	Herbicide runoff.
Atrazine	2010	0.12	.11-.12	3	3	ppb	N	Runoff from herbicide used on row crops.

Maximum Residual Disinfectant Level

Residual Disinfectant Level	Collection Date	Highest Single Sample	Range of Levels Detected	MRDL	MRDLG	Units	Violation	Likely Source of Contamination
Chlorine Residual	2010	3.0	.50-3.0	4	<4.0	ppm	N	Disinfectant used to control microbes.

Disinfection Byproducts

Disinfectants and Disinfection By-Products	Collection Date	Highest Single Sample	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Haloacetic Acids	2010	12.7	6.1 - 12.7	No goal for the total	60	ppb	N	By-product of drinking water chlorination
Total Trihalomethanes (TTHM)	2010	17.2	8.2 - 17.2	No goal for the total	80	ppb	N	By-product of drinking water chlorination

Unregulated Initial Distribution System Evaluation for Disinfection Byproducts:

WAIVED OR NOT YET SAMPLED

Unregulated Contaminants

Bromoform, chloroform, dichlorobromomethane, and dibromochloromethane are disinfection byproducts. There is no maximum contaminant level for these chemicals at the entry point to distribution.

Unregulated Contaminants	Collection Date	Highest Single Sample	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Chloroform	2009	4.8	4.8-4.8	n/a	n/a	ppb	N	Byproduct of drinking water disinfection.
Bromodichloromethane	2009	4.1	4.1-4.1	n/a	n/a	ppb	N	Byproduct of drinking water disinfection.
Dibromochloromethane	2009	2.2	2.2-2.2	n/a	n/a	ppb	N	Byproduct of drinking water disinfection.

Unregulated Contaminants Monitoring Rule 2 (UCMR2)

Unregulated Contaminants are those for which EPA has not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist EPA in determining the occurrence of unregulated contaminants in drinking water and whether future regulation is warranted. Any unregulated contaminants detected are reported in the following table. For additional information and data visit hhtp://epa.gov/safewater/ucmr/ucmr2/index.html, or call the Safe Drinking Water Hotline at (800) 426-4791.

UCMR2	Collection Date	Highest Single Sample	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
None detectable	2010	none	none	none	none	none	N	None detectable

Lead and Copper

Lead and Copper	Date Sampled	MCLG	Action Level (AL)	90th Percentile	# Sites Over AL	Units	Violation	Likely Source of Contamination
Copper	2010	1.3	1.3	1.3	2	ppm	N	Erosion of natural deposits; Leaching from wood preservatives: Corrosion of household plumbing systems
Lead	2010	0	15	2.9	0	ppb	N	Corrosion of household plumbing systems; Erosion of natural deposits.

Required Additional Health Information for Lead

"If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. This water supply is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at http//www.epa.gov/safewater/lead."

Turbidity

Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea and associated headaches.

Year (Range) Contaminant		Highest Single Measurement	Lowest Monthly % of Samples Meeting Limits	Turbidity Limits	Unit of Measure	Source of Contaminant
Turbidity	2009	0.50	99.00	0.3	NTU	Soil Runoff

Total Coliform

Total coliform bacteria are used as indicators of microbial contamination of drinking water because testing for them is easy. While not disease-causing organisms themselves, they are often found in association with other microbes that are capable of causing disease. Coliform bacteria are more hardy than many disease-causing organisms; therefore, their absence from water is a good indication that the water is microbiologically safe for human consumption.

Year	Contaminant	Highest Monthly Number of Positive Samples	MCL	Unit of Measure	Source of Contaminant
2010	Total Coliform Bacteria	1	*	Presence	Naturally present in the environment

*** Two or more coliform found samples in any single month.**

Fecal coliform bacteria and, in particular, E. coli, are members of the coliform bacteria group originating in the intestinal tract of warm-blooded animals and are passed into the environment through feces. The presence of fecal coliform bacteria (E. coli) in drinking water may indicate recent contamination of the drinking water with fecal material. The following table indicates whether total coliform or fecal coliform bacteria were found in the monthly drinking water samples submitted for testing by your water supplier last year.

Fecal Coliform - Reported monthly tests found no fecal coliform bacteria.

Secondary and Other Not Regulated Constituents (No associated adverse health effects)

Year (Range)	Constituent	Average Level	Minimum Level	Maximum Level	Limit	Unit of Measure	Source of Constituent
2008-2005	Aluminum	0.007	0	0.021	.05	ppm	Abundant naturally occurring element.
2008-2005	Bicarbonate	189	168	199	NA	ppm	Corrosion of carbonate rocks such as limestone.
2008-2005	Calcium	56.6	54.8	60.1	NA	ppm	Abundant naturally occurring element.
2008-2005	Chloride	91	88	92	300	ppm	Abundant naturally occurring element; used in water purification; byproduct of oil field activity
2008-2005	Copper	0.017	0.011	0.03	1	ppm	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives.
2008-2005	Iron	0.043	0	0.064	.3	ppm	Erosion of natural deposits; iron or steel water delivery equipment or facilities.
2008-2005	Magnesium	12.1	11.9	12.6	NA	ppm	Abundant naturally occurring element.
2008-2005	Manganese	0.0094	0.0031	0.0125	.05	ppm	Abundant naturally occurring element.
2008-2005	Nickel	0.002	0.002	0.002	NA	ppm	Erosion of natural deposits.
2008-2005	pH	7.2	6.8	7.4	>7.0	units	Measure of corrosivity of water.
2008-2005	Sodium	75	61	83	NA	ppm	Erosion of natural deposits; byproduct of oil field activity.
2008-2005	Sulfate	66	64	70	300	ppm	Naturally occurring; common industrial byproduct; byproduct of oil field activity.
2008-2005	Total Alkalinity as CaCO3	155	138	163	NA	ppm	Naturally occurring soluble mineral salts.
2008-2005	Total Dissolved Solids	412	383	427	1000	ppm	Total dissolved mineral constituents in water.
2008-2005	Total Hardness as CaCO3	191	185	202	NA	ppm	Naturally occurring calcium.
2008-2005	Zinc	0.373	0.3	0.52	5	ppb	Moderately abundant naturally occurring element; used in the metal industry.

Water Conservation Tips

In the Bathroom:

1. Take a five minute shower instead of a bath.
   Amount saved: 15 gallons per shower
2. Don't use toilets as a wastebasket, flush only when you need to.
   Amount saved: 12 or more gallons per day
3. When brushing teeth, use a glassful of water instead of running the tap.
   Amount saved: 3 or more gallons per brushing.
4. When taking a bath, don't run the water without closing the drain first. The warm water that comes after running the tap for a while will take care of that first cold burst of water.

In the Kitchen:

1. When washing dishes by hand, fill up the sink with soap and water instead of running the water the whole time. *Amount saved: 25 gallons per load*
2. Keep a pitcher of water in the refrigerator when you want a drink instead of running the tap until the water cools. *Amount saved: 2 gallons per drink*
3. Thaw frozen foods in the refrigerator, not under running tap water. Amount saved: 5 or more gallons per meal
4. Start a compost pile as an alternative to using a kitchen sink garbage disposal.

Outside around your home:

1. Water your lawn during the early morning hours when there are low temperatures and low winds. This reduces the amount of water you lose from evaporation.
2. Position your sprinklers to water only the lawn, not the sidewalk or street.
3. Don't waste water hosing down your driveway or sidewalk.
   Amount saved: 25 gallons every five minutes not using hose
4. Drive your car over your lawn when washing to save on watering it, or use a commercial car wash that recycles water.
5. Don't over water your lawn during the summer, as a general rule it only needs to be watered every 5-7 days during this time.

City of Lake Jackson
25 Oak Drive
Lake Jackson, TX 77566

Public Participation Opportunities:

Please contact David Ellis, Superintendent of Utilities, at 979-415-2680 with any questions.

Check out our website at www.lakejackson-tx.gov for more information!